REMARKS

Specification

Applicant amends the specification by inserting the headings suggested by the USPTO Guidelines.

Claim Objections

Applicant requests the Examiner to reconsider and withdraw the objection to claims 1-11, because the amended claims 2-11 and new claim 12 now contain the term "wherein" instead of "characterized in".

Claims Rejections - 35 U.S.C. §112

Applicant respectfully requests the Examiner to reconsider and withdraw the rejection of claims 1-11 under 35 U.S.C. § 112, second paragraph, in view of the new independent claim 12 in which the questioned language has been replaced by "between the pressurized tube (64) and either the injection tube (60) or the pressure tube (66)".

Claim Rejections -35 U.S.C. §103

Examiner Vu issues the following two prior art rejections:

(1) Claims 1-10 are rejected under 35 U.S.C. § 103(a) as being unpatentable (obvious) over Duchon '854 (cited in the IDS) in view of Oscarsson '496 (cited in the IDS); and

(2) Claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable (obvious) over Duchon '854 in view of Houde '904.

Applicant respectfully **traverses** these rejections, insofar as they may be applied to the new independent parent claim 12 and its dependent claims 2-11.

The basis for this traversal is that cited references, taken in any combination, do not teach, or even suggest, all of the limitations of claims 2-12, as will be explained below.

Furthermore, even if the teachings of the references were combined as proposed by the Examiner, there would not be produced the subject matter of claim 12 or its dependent claims 2-11, or subject matter which would have rendered these claims obvious.

More specifically, new claim 12 includes all the features of original claim 1, some of these features being recited in different order. New claim 12 also includes additional new features which essentially are directed to the fact that the slide (112) of the distributor (32) forms a compartment (126), within the chamber. When the distributor (32) controls the connection between the pressurised tube (64) and the pressure measurement tube (66), the active medical fluid circulates between the two aforesaid tubes via this compartment (126). Furthermore, when the distributor (32) controls the connection between the flush tube (68) and the pressure measurement tube (66), the flush medical fluid circulates between the two aforesaid tubes via the same compartment (126). These features are supported in page 11, line 30 to page 12, line 2, in page 12, lines 15 to 20, and in page 13, lines 20 to 26, of Applicant's specification.

Duchon discloses a distribution device for a system 10 for delivery of medical fluids to a patient. If we use the words of claim 12 in order to describe the **Duchon** device as shown in Figures 1 and 7A to 7D of **Duchon**, we can say that this device comprises:

a syringe body 18,

a feed tube 78 for an active medical fluid (a radiographic contrast material), opening into the syringe body 18 and designed to be connected to a reservoir 22 for this active medical fluid,

a distributor 26 comprising a body, within which a chamber is bounded, and within this chamber both a slide 362, which can move in relation to the body of distributor 26, and a resilient member 372 placed between slide 362 and a fixed part 374 of distributor 26,

an injection tube 80 for the injection of the active medical fluid, connected to a distal extremity of syringe body 18 and opening into the chamber of distributor 26,

a pressurised tube 84 designed to be connected to the patient through a pressurised line 28 of system 10 and opening into the chamber of distributor 26,

a pressure measurement tube 82 designed to be connected to a pressure measurement line 90+92 of system 10 and opening into the chamber of the distributor 26, and

a flush tube 42 designed to be connected to a reservoir 50 for a flush medical fluid (a saline solution).

Distributor 26 is designed to provide an automatic connection via its chamber between pressurised tube 84 and either injection tube 80 (see Figure 7D) or pressure measurement tube 82 (see Figures 7A, 7B and 7C) through the action of the pressure of the active medical fluid and resilient member 372.

When pressurised tube 84 and pressure measurement tube 82 are thus in connection, the active medical fluid circulates between them via a diagonal passage 376. This diagonal passage 376 is exclusively delimited by the body of slide 362. Consequently, this diagonal passage does

not constitute a compartment formed by the slide and walls of the chamber of the distributor, as defined in claim 12.

Moreover, contrary to the flush tube as defined in claim 12, flush tube 42 of the **Duchon** device is not formed in the body of distributor 26 in a separated way from the other tubes 78, 80, 84 and 82 (in particular, tube 82 is used **both** for measuring the pressure in distributor 26 and **also** for flushing the distributor).

Furthermore, flush tube 42 opens in pressure measurement line 90+92: consequently, the flush medical fluid coming from flush tube **42** circulates directly in line 90+92, **without circulating in a part of the chamber of distributor 26.** On the contrary, in claim 12, the flush medical fluid circulates "between the flush tube (68) and the pressure measurement tube (66)…via the compartment (126)" of the slide within the chamber (62).

Besides, flush tube 42 of the **Duchon** device is not provided with "a valve equipped with a plug which can be moved manually", as admitted by the Examiner in the Office Action.

As a consequence, the device defined by claim 12 can be distinguished from the **Duchon** device by the facts that:

first, in the claimed invention, two separate tubes for respectively flushing and pressure measuring open into the chamber of the distributor; in use, the flush medical fluid can circulate between these two separate tubes via a compartment delimited by the walls of the chamber and by the slide; and

second, the circulation of the flush medical fluid is controlled by a valve provided in the flush tube, "with a plug which can be moved manually".

Oscarsson discloses a distribution device A comprising a valve with a plug located between a first tube section 14 and a second tube section 22. The **Oscarsson** device further comprises a pressure measurement tube 34 which opens into the middle part of tube section 22, between plug 80 and a female fitting 28. The aforesaid middle part of tube section 22 is totally free, that is to say, it is not provided with a movable slide through which a flush fluid coming from plug 80 could be circulated (see Figure 5). In other words, the flush fluid coming from plug 80 circulates **directly** between the middle part of tube section 22 and, for one part of the fluid, tube 34 and, for the rest of the fluid, the inside of fitting 28.

Regarding the combination of **Duchon** and **Oscarsson**, as considered by the Examiner in the Office Action, a man ordinarily skilled in the art is necessarily taught to replace line 90 of the **Duchon** device by the **Oscarsson** device in view of improving the flushing and the pressure measuring. In other words, the man ordinarily skilled in the art would connect female fitting 28 of the **Oscarsson** device to tube 82 of the **Duchon** device, while connecting the pressure transducer 38 of the **Duchon** device to the free end of tube 34 of the **Oscarsson** device, and connecting reservoir 50 of the **Duchon** system to the free end 18 of tube section 14 of the **Oscarsson** device. Thus, the man ordinarily skilled in the art would obtain a distribution device which does **not** correspond to the device defined in claim 12, because:

first, the flush tube constituted by tube sections **14** and 22 of the **Oscarsson** device is not formed in the body of distributor 26 of the **Duchon** device because of the presence of fitting 28 between them;

second, the assembly of the **Duchon** device and the **Oscarsson** device does not provide two separate tubes opening in the chamber of distributor 26, respectively for the flushing and the pressure measuring (because tube 34 opens directly into tube section 22 of the **Oscarsson** device); and

third, the flush medical fluid does not circulate between flush tube 14+22 and pressure measurement tube 34 through the body of distributor 26, especially via a compartment delimited by slide 362 and by the walls of the chamber of distributor 26.

Thanks to the claimed invention, the distributor body can be designed in a very compact way in the sense that the second section (68B) of the flush tube (68) can be very short (at least shorter than tube section 22 of the **Oscarsson** device). Thus, the fabrication of the distributor body according to the claimed invention is facilitated because the flush tube (68) and the pressure measurement tube (66) extend independently from each other up to the chamber (62) of the distributor body (32B). Furthermore, the pressure measuring and the flushing by the device according to the claimed invention are improved because the compartment (126) facilitates and homogenizes the circulation of the two medical fluids between the different separate tubes that are in connection via this compartment, in function of the position of the slide (112). In particular, the formation and the trapping of bubbles is considerably reduced (especially in comparison with diagonal passage 376 in slide 362 of the **Duchon** device, this diagonal passage being provided to connect tube 84 with tube 82 in a strictly fit way).

Thus, since the **Duchon/Oscarsson** combination does not teach, or even suggest, **all of the limitations** of parent claim 12 and its dependent claims 2-10, Applicant respectfully requests the Examiner to reconsider and withdraw rejection (1) above.

Furthermore, it is noted that even if **Duchon** were modified by **Oscarsson** as proposed by the Examiner, there would not be produced the subject matter of any of claims 12 and 2-10.

As for rejection (2) above, dependent claim 11 (11/12) inherits the limitations of its parent claim 12, and therefore should be allowable for this reason alone. Furthermore, **Houde** '904 clearly does not provide, or even suggest, any of the above-described deficiencies in **Duchon's** disclosure with respect to claim 12. Thus, even if **Duchon** were modified, as proposed by the Examiner, with **Houde's** feed line, there would not be produced the subject matter of dependent claim 11 (11/12) or subject matter which would have rendered claim 11 obvious.

Therefore, Applicant also respectfully requests the Examiner to reconsider and withdraw rejection (2) above.

To facilitate the Examiner's comparison of the new independent parent claim 12 with the original (canceled) independent parent claim 1, Applicant presents in the attached EXHIBIT A the original claim 1 in which the order of claim elements has been changed, and which contains in bold type words added to the original claim 1 (without showing any deletions in the original claim 1).

In summary, then, and for the reasons presented above, Applicant respectfully requests the Examiner to reconsider and withdraw all requirements, objections and rejections, and to find

the application to be in condition for allowance with all of claims 2-12; however, if for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is respectfully requested to **call the undersigned attorney** to discuss any unresolved issues and to expedite the disposition of the application.

Applicant files concurrently herewith a Petition (with fee) for an Extension of Time of three months (Small Entity). Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this application, and any required fee for such extension is to be charged to Deposit Account No. 19-4880. The Commissioner is also authorized to charge any additional fees under 37 C.F.R. § 1.16 and/or § 1.17 necessary to keep this application pending in the Patent and Trademark Office or credit any overpayment to said Deposit Account No. 19-4880.

Respectfully submitted,

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